6. MASTER MAKING AREA

CONTENTS

Operation and Function VI-1

1. Image Scanning Section VI-2
[Theory of Operation]
1. Original Feed System VI-2
2. Original Feed Check System VI-4
3. Image Scanning System VI-6

[Removal Procedures & Precautions for Installation]
1. Image Scanner Unit VI-8
2. ADF Unit VI-8
3. Digitizer Unit VI-9
4. Image Processing PCBs VI-9
5. Image Scanning Section VI-9

[Adjustment Procedures]
1. Sensitivity of Original IN Sensor VI-10
2. Position of ADF Interlock Switch VI-11

2. Master Making Section VI-12
[Theory of Operation]
1. Master Making System VI-12
2. Master Loading System VI-14

[Removal Procedures & Precautions for Installation]
1. Thermal Print Head VI-16
2. Write Roller VI-17

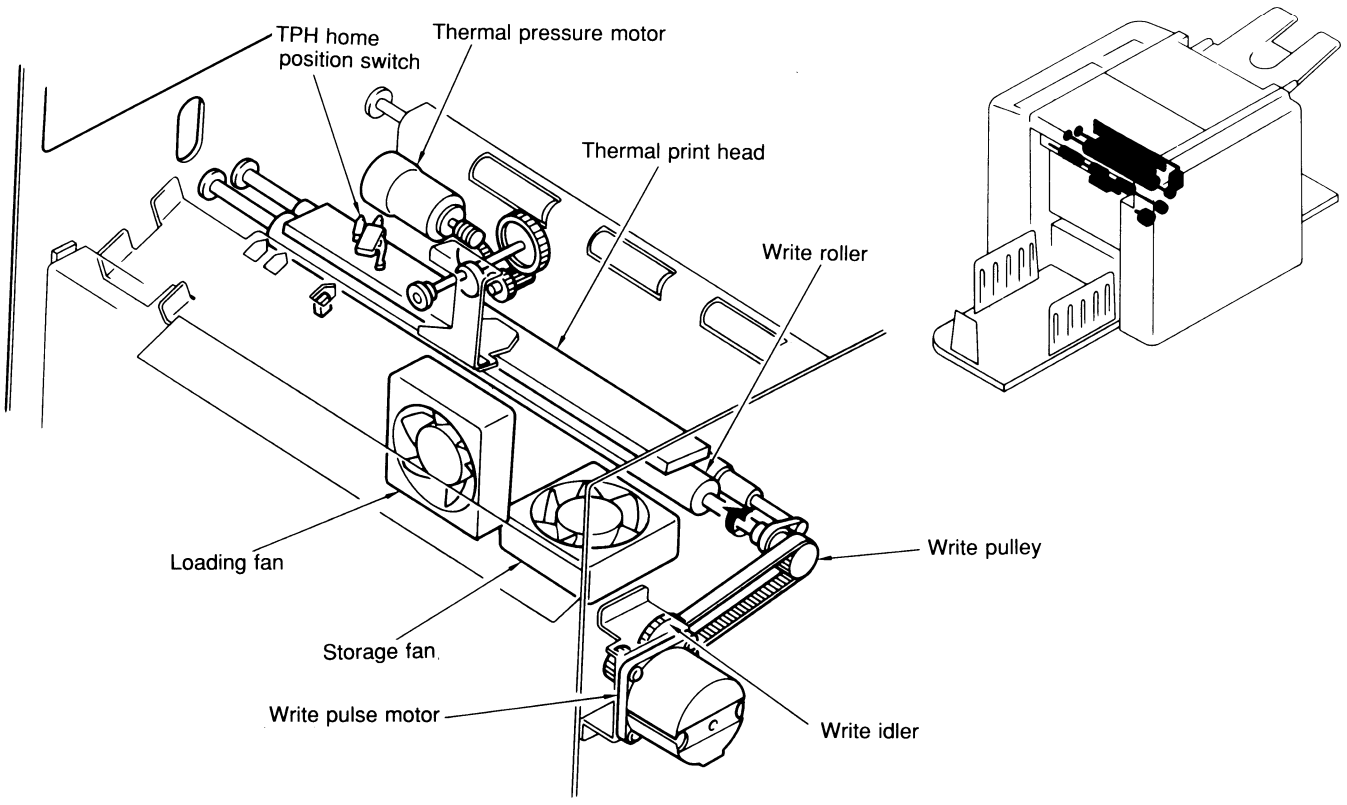
[Adjustment Procedures]
1. Sensitivity of Master Detection Sensor VI-18
2. Sensitivity of Master End Sensor VI-19
3. Tension of Write Pulse Motor Belt VI-20
4. Tension of Loading Pulse Motor Belt VI-21
5. Position of TPH Home Position Switch VI-22
6. Thermal Power of Thermal Print Head VI-23

2. Master Making Section

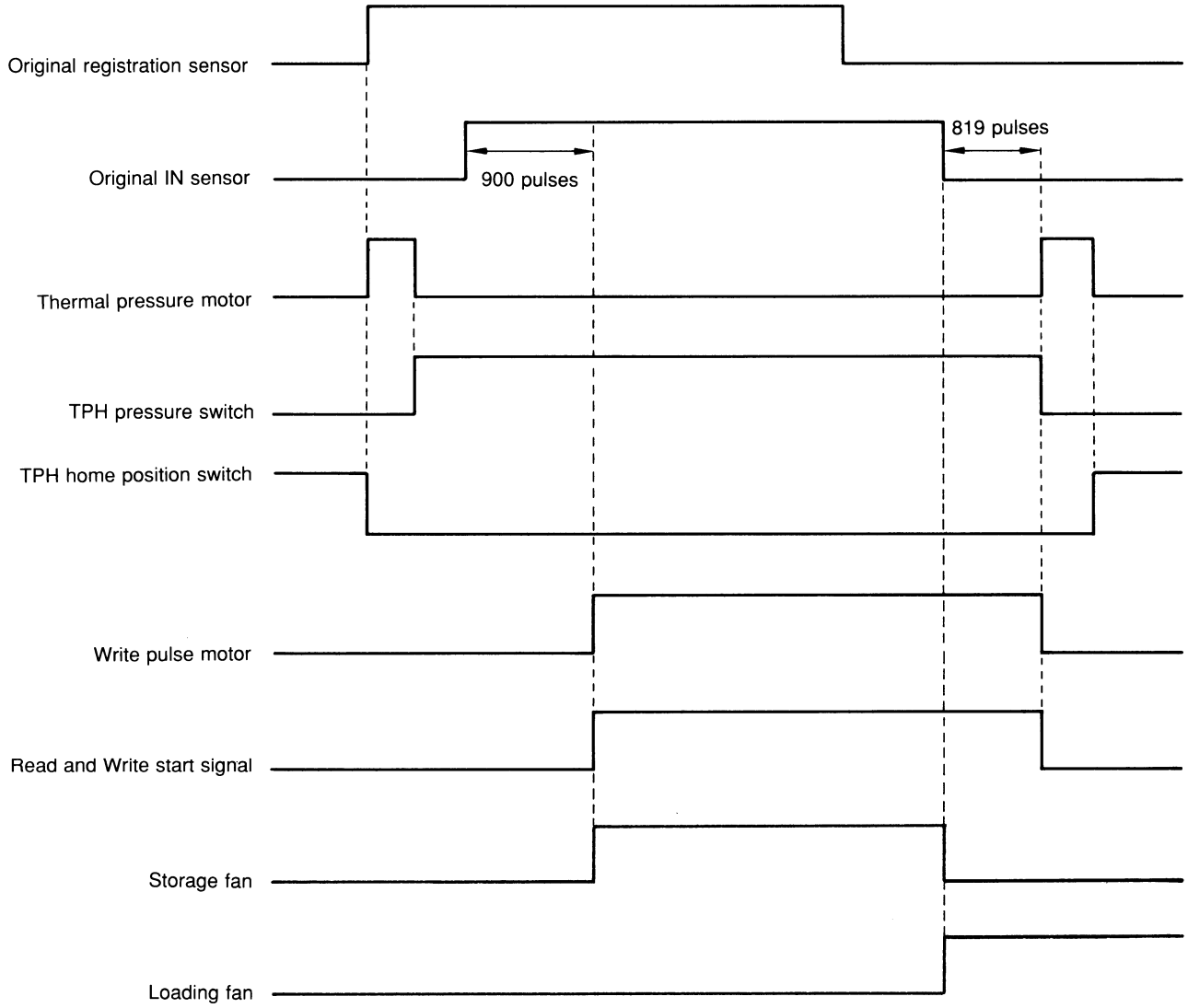
[Theory of Operation]

1. Master Making System

- **Function of Thermal print head**
  The Thermal print head heats up according to the signals sent from the Image processing PCBs and creates holes on the master.
- **Preparation for Master-making**
  When an original is detected by the Original registration sensor, the Thermal pressure motor rotates lowering the Thermal print head until the TPH pressure switch is pressed on.
  The master material is now pressed between the Write roller and the Thermal print head.
- **Start of Master-making**
  900 pulses after the lead edge of the original has been detected by the Original IN sensor, the Read and Write start signal is turned ON and starts the Write roller (the Write pulse motor) rotation.
- **Master Feeding**
  When the Write pulse motor starts rotating, it rotates the Write roller clockwise via the Write idler, belt, and Write pulley.
  The master is then fed at the same speed as the original (size-to-size setting).
- **Heating up of Thermal print head**
  When the Read and Write start signal is turned on, the Thermal print head is heated up and the master is created.
- **Finish of Master-making**
  819 pulses after the trail edge of the original is detected by the Original IN sensor, the Read and Write start signal and Write pulse motor go off.
  At the same time, the Thermal pressure motor is rotated and starts raising the Thermal print head away from the master until the TPH home position switch is pressed on.
- **Storage of a new master after TPH**
  The new master is fed into the Master stocker while the previous master is removed from the Drum.
  While in the stocker, the new master is suspended by a suction created by the Storage fan to await loading to the Drum.



Master Making System



2. Master Loading System

- Lowering of Thermal Print Head

When the Master loading unit is closed, the Master loading unit switch is pressed, causing the Thermal pressure motor to rotate until the TPH pressure switch has been pressed.

The Thermal print head is now pressing the master material onto the Write roller so that the material can be fed.

- Start of Master loading

When the TPH pressure switch has been pressed, the Write and Loading pulse motors start to rotate clockwise, causing the Write roller to rotate via the Write idler, belt, and Write pulley and to feed the master.

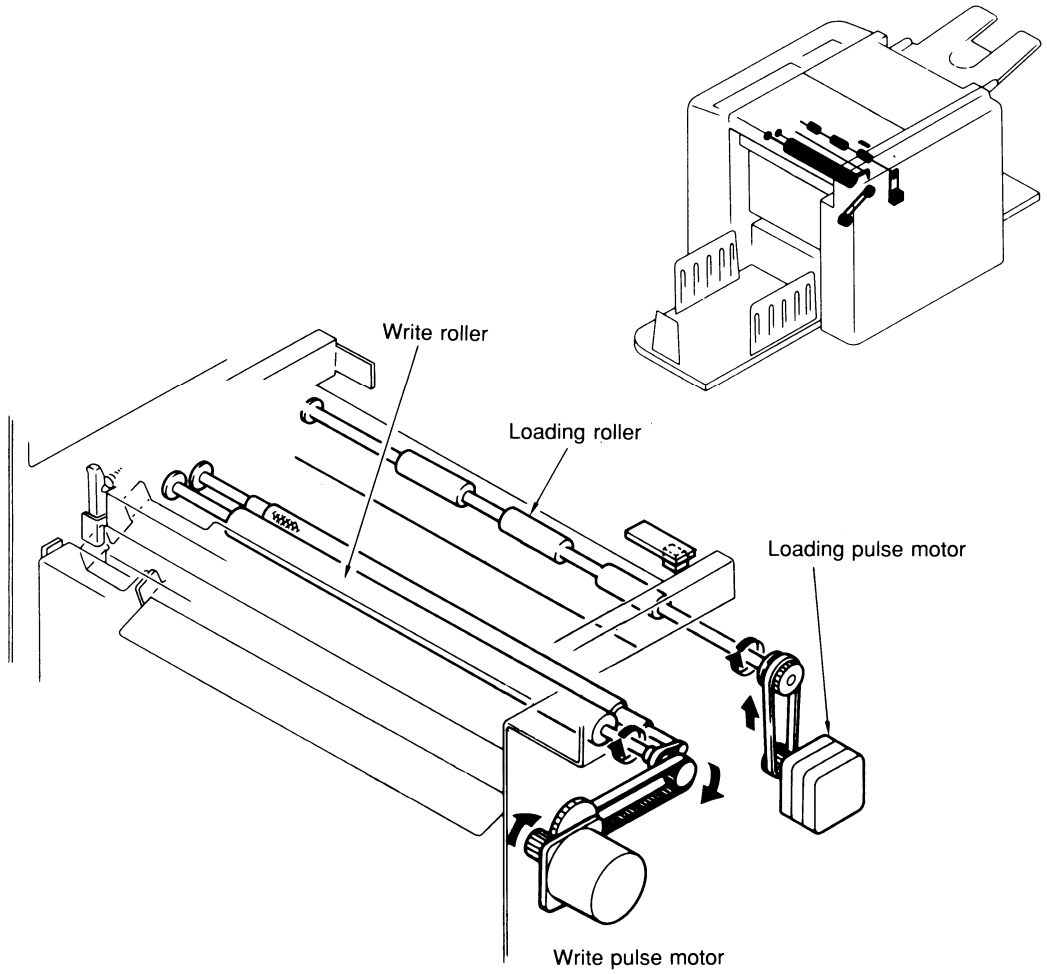
The master is fed further by the loading rollers, which are rotated by the Loading pulse motor via the belt and the Loading pulley.

- Finish of Master loading

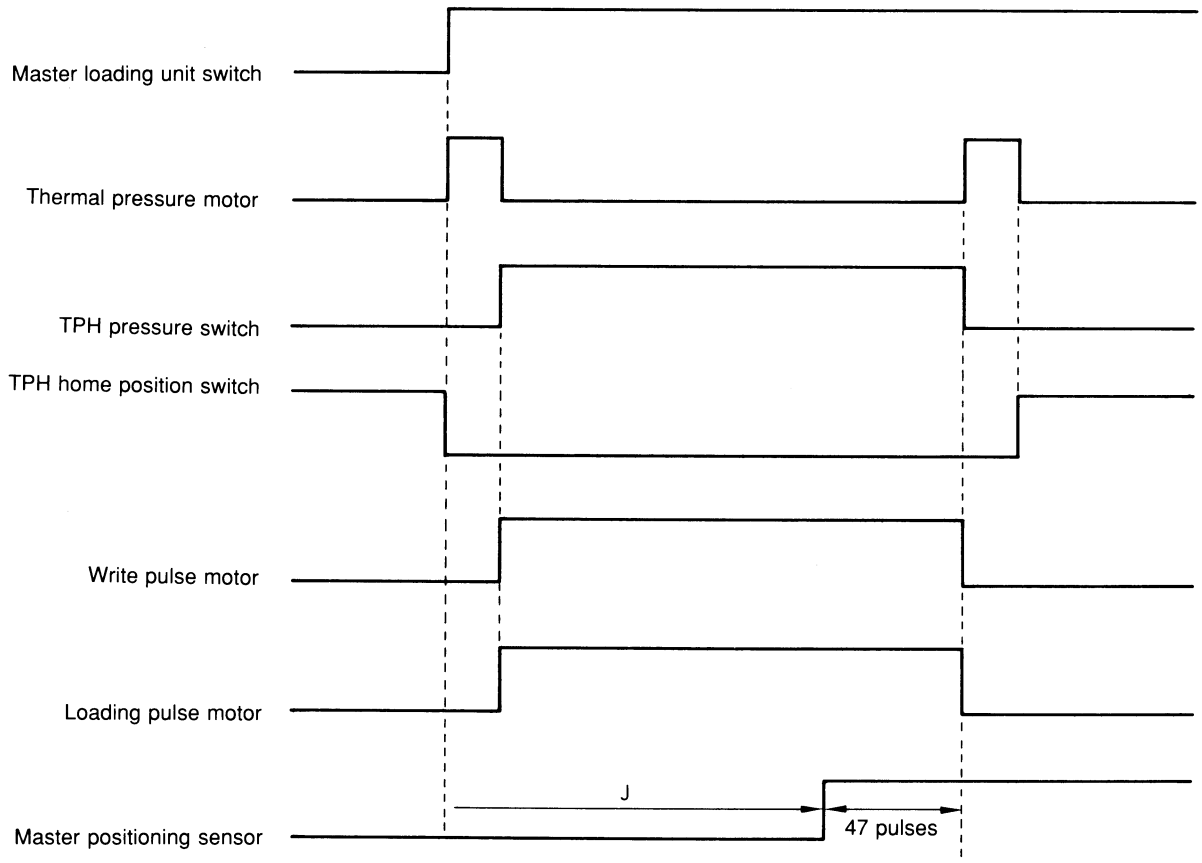
The Write and Loading pulse motors are turned off to finish the master loading **47 pulses** after the lead edge of the master is detected by the Master positioning sensor.

- Retreat of Thermal Print Head

When the master loading is completed, the Thermal pressure motor is activated and the Thermal print head rises until the TPH home position switch is pressed on.



Master Loading System



J: If the Master positioning sensor has not detected the lead edge of the fed master material (the reflected light) **within 2426** pulses after the actuator of the Master loading unit switch was pressed on, the error message **"MASTER MIS-FEED/ RESET MASTER"** is displayed on the panel.